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COST OF OPERATING FARM MOTOR TRUCKS ON GRAIN FARMS
(Northern Great Plains and Pacific Northwest, 1933)

By R. S. Washburn, Assistant Agricultural Economist

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INTRODUCTION

Successive years of low farm incomes have seriously reduced the resources of many farmers in the spring wheat regions of the Northern Great Plains and of the Pacific Northwest. Because of the need for adjustment in the organization and operation of grain farms in these regions and in the light of changing economic conditions, information with reference to farm organization and farming practice was obtained.

The study was made in April, May, and June of 1934 and, for the most part applies to the crop year 1933. The field data were obtained by personal interviews with 1,674 farm operators in grain-producing areas of the Northern Great Plains and of the Pacific Northwest. The farming areas surveyed, shown in figure 1, are those outlined in United States Department of Commerce, Bureau of the Census Bulletin "Types of Farming in the United States". The farmers interviewed gave detailed information on the organization and operation of their farms, such as acreage of wheat and other crops grown, a history of crop yields over a period of years, the practices employed in the production of wheat and other crops; the numbers and kinds of livestock; the kinds and quantities of livestock products; an inventory of the kinds and quantity of equipment on the farm; the duty of machinery; and the cost of operating power equipment.

As the study aimed to show the methods of growing and harvesting crops, particularly wheat, the sample of farms may show a larger acreage

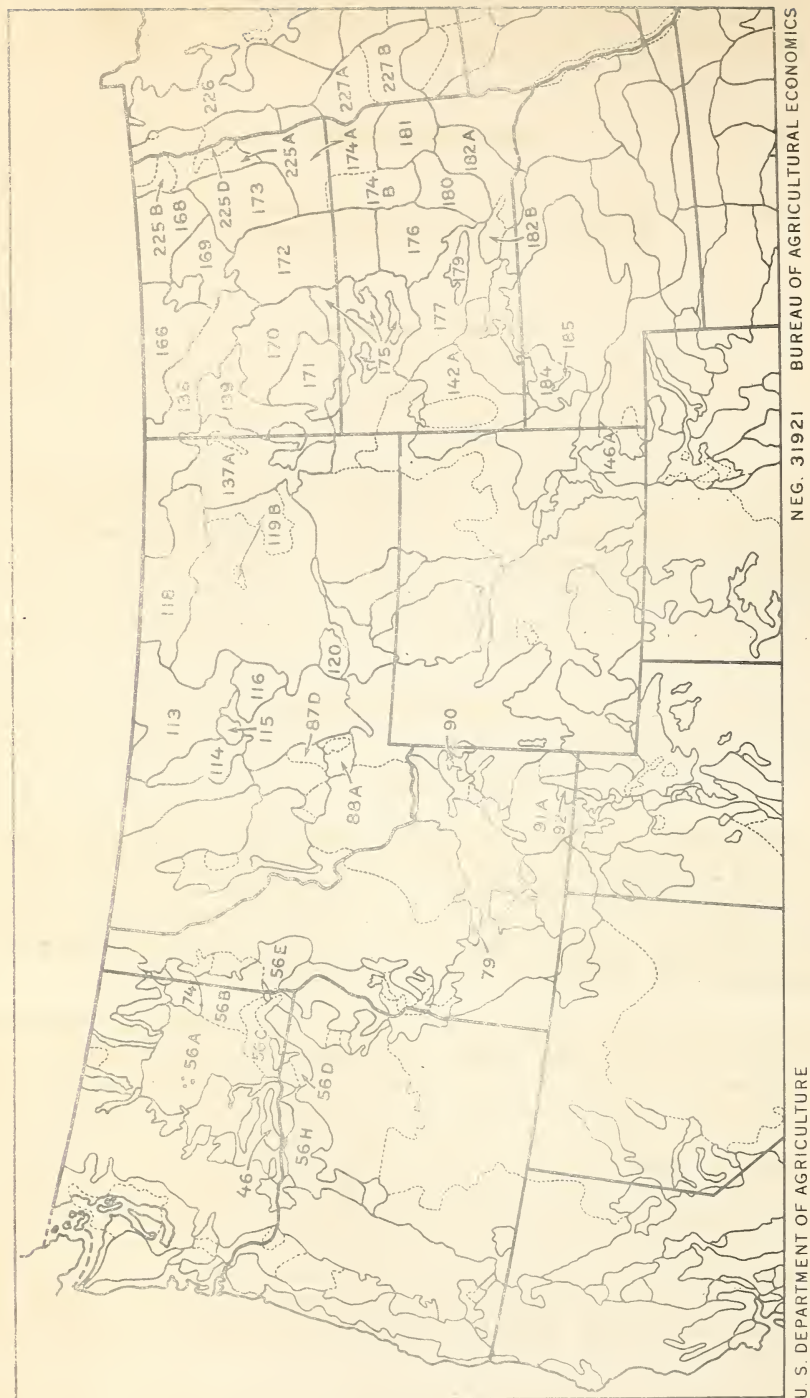


Figure I.- Type-of-farming areas where study was made of the cost of operating farm motor trucks on grain farms. (Areas are those outlined in United States Department of Commerce, Bureau of the Census Bulletin "Types of Farming in the United States 1930.")

of wheat and a higher proportion of the land in crops than would a county average. No particular effort was made for any other selection, however, and it is believed that the records obtained are typical of grain farms in the type-of-farming areas studied.

In certain sections of the Northern Great Plains, particularly western North Dakota, eastern Montana, and many areas of South Dakota, conditions of extreme drought prevailed in 1933. As a result very little harvest was reported in the drought areas, and the harvest work done with power equipment was abnormal. The use of equipment in a normal season rather than that reported in 1933 has been used in calculating the cost of operating power equipment.

In many areas the use of large-scale power equipment was common and constituted a large part of the farm expense. For this reason a series of reports dealing with farm equipment is being published.

The purpose of the present report is to show the extent to which farm motor trucks are used and what present owners, as well as prospective purchasers of motor trucks, can reasonably expect in the way of cost of using motor trucks on relatively large grain farms. The other publications in the machinery series are:

1. Utilization of tractors and cost of tractor power on grain farms (Northern Great Plains and Pacific Northwest, 1933).
2. Utilization of combined harvester-threshers and cost of harvesting small grains with a combine (Northern Great Plains and Pacific Northwest, 1933).
3. Tillage, planting, and harvesting equipment on grain farms and rates of doing field work with these implements when drawn with horse and with tractor power (Northern Great Plains and Pacific Northwest).

NUMBER AND SIZE OF FARMS HAVING MOTOR TRUCKS AND NUMBER AND SIZE OF FARMS NOT HAVING MOTOR TRUCKS, BY TYPE-OF-FARMING AREAS

Trucks were used in practically all areas surveyed in the Northern Great Plains, but the greatest numbers were on farms in the more westerly areas (table 1). In Minnesota about 15 percent were farms on which motor trucks were used, in the eastern and central parts of North Dakota and South Dakota about 20 percent, and in the western part of North Dakota and South Dakota about 40 percent. In the Montana, Wyoming, and Nebraska areas approximately 50 percent of the farms were equipped with motor trucks and for the entire region 36 percent of the farm operators used trucks whereas 64 percent did not. In all areas except one the crop acres per farm on farms where trucks were used exceeded the acreage on farms where trucks were not used. For the region as a whole the crop area per farm was approximately 100 percent larger on farms where motor trucks were used than on farms where motor trucks were not used.

In the Pacific Northwest motor trucks were used in all areas (table 2). For the entire region 45 percent of the farm operators used motor trucks. The crop area per farm averaged 83 percent larger on farms where motor trucks were used than on farms where motor trucks were not used.

Table 1. - Number of farms having motor trucks and not having motor trucks, and crop area per farm on selected farms by type-of-farming area, Northern Great Plains, 1933

State and type-of-farming areas	Farms reporting trucks		Farms without trucks		All farms	
	Crop area:		Crop area:		Crop area:	
	Farms	per farm	Farms	per farm	Farms	per farm
	Number	Acres	Number	Acres	Number	Acres
Minnesota						
225A	6	311	37	305	43	305
226	-	-	16	160	16	160
225D	5	552	15	257	20	331
227A	6	324	19	220	25	245
227B	3	389	26	179	29	201
North Dakota						
225B	4	629	8	356	12	445
173	7	565	27	339	34	386
174A	6	426	46	369	52	375
168	1	320	39	516	40	511
169	15	665	21	382	36	500
172	9	428	46	330	55	346
170	10	344	27	259	37	282
171	19	620	29	310	48	433
136	32	555	38	313	70	424
139	11	615	8	242	19	458
166	18	687	22	345	40	499
South Dakota						
181	6	420	26	286	32	311
182A	-	-	27	208	27	208
174B	5	550	26	349	31	382
180	8	328	22	261	30	279
176	15	796	26	457	41	581
179	8	753	11	333	19	510
182B	5	718	21	273	26	358
175	10	684	19	379	29	484
142A 177	13	544	14	355	27	446
Nebraska						
184	18	450	29	291	47	352
185	11	1025	11	306	22	665
Montana						
137A	10	468	24	288	34	341
119B	9	1019	14	341	23	606
118	19	407	10	300	29	370
113	34	820	16	506	50	720
114	35	628	11	273	46	543
115	23	1198	3	300	26	1094
116	20	642	21	321	41	478
87D	7	533	15	214	22	315
88A	15	490	27	326	42	384
120	6	824	14	356	20	496
Wyoming						
146A	24	745	6	422	30	680
Total or average	453	643	817	321	1270	436

Table 2. - Number of farms having motor trucks and not having motor trucks and crop area per farm on selected farms by type-of-farming area, Pacific Northwest, 1933

State and type-of-farming: areas	Farms reporting trucks		Farms without trucks		All farms	
	:Crop area:		:Crop area:		:Crop area	
	Farms	per farm	Farms	per farm	Farms	per farm
	Number	Acres	Number	Acres	Number	Acres
Oregon	:	:	:	:	:	:
56H	: 15	: 1637	: 26	: 1004	: 41	: 1236
56D	: 27	: 1280	: 3	: 449	: 30	: 1197
Washington	:	:	:	:	:	:
46	: 21	: 1322	: 11	: 872	: 32	: 1167
56C	: 14	: 2243	: 27	: 860	: 41	: 1332
56A	: 30	: 1227	: 33	: 935	: 63	: 1074
56B	: 22	: 554	: 36	: 342	: 58	: 423
74	: 7	: 474	: 17	: 288	: 24	: 342
Idaho	:	:	:	:	:	:
56E	: 15	: 742	: 18	: 310	: 33	: 506
79	: 7	: 1186	: 8	: 424	: 15	: 779
90	: 10	: 744	: 13	: 755	: 23	: 750
91A	: 11	: 557	: 18	: 368	: 29	: 440
92A	: 2	: 740	: 13	: 331	: 15	: 385
Total or average	: 181	: 1133	: 223	: 619	: 404	: 849

CROPS PRODUCED ON FARMS HAVING MOTOR TRUCKS, AND NUMBER AND SIZE OF TRUCKS BY TYPE-OF-FARMING AREAS

In the Northern Great Plains, on farms where motor trucks were used, the proportion of the crop area utilized for the production of different crops varied to a considerable extent in, as well as between different type-of-farming areas. The agriculture of the region as a whole, however, may be classified as primarily a cash grain type-of-farming with wheat the major crop (table 3). Proportionately more of the total crop area was devoted to wheat and summer fallow in central and western Montana and in southeastern Wyoming than in other areas studied. In southeastern Wyoming about 15 percent of the crop area was devoted to corn. Here, as well as in the central and western areas of Montana, few crops other than wheat were grown. From west to east we note that a rather decided change in the cropping system begins to appear. Instead of alternating wheat with summer fallow, the common practice is to grow wheat in combination with corn, oats, and barley, particularly in western Minnesota. The greatest concentration of corn acreage was in southwestern Minnesota and eastern North and South Dakota. A considerable potato acreage was grown on some farms in northwestern Nebraska and western Minnesota. Other crops grown to a limited extent in most type-of-farming areas were rye, spelt, alfalfa, and sweet-clover. Trucks of 1 and $1\frac{1}{2}$ ton capacity were the ones in general use.

Table 3. -- Number of farms and crop area of farms having motor trucks, and number and size of motor trucks, by type-of-farming areas, Northern Great Plains, 1933 ^{1/}

State and type- of-farming areas	Farms :	Size of farms :	Crop area per farm					Total :
			Wheat	Other	Summer	Idle		
			Acres	crops	fallow	Acres	Acres	
	Number	Acres	Acres	Acres	Acres	Acres	Acres	
Minnesota	:	:	:	:	:	:	:	
225A	: 6	: 344	: 88	: 211	: 12	: -	: 311	
225D	: 5	: 650	: 208	: 280	: 42	: 22	: 552	
227A	: 6	: 377	: 61	: 262	: 1	: -	: 324	
227B	: 3	: 477	: 97	: 278	: 13	: 1	: 389	
North Dakota	:	:	:	:	:	:	:	
225B	: 4	: 676	: 201	: 341	: 74	: 4	: 620	
173	: 7	: 777	: 303	: 189	: 73	: -	: 565	
174A	: 6	: 573	: 171	: 233	: 22	: -	: 426	
168	: 1	: 480	: 120	: 140	: 60	: -	: 320	
169	: 15	: 868	: 460	: 149	: 51	: 5	: 665	
172	: 7	: 855	: 237	: 206	: 6	: -	: 449	
170	: 10	: 681	: 217	: 127	: -	: -	: 344	
171	: 19	: 1118	: 427	: 182	: 3	: 8	: 620	
136	: 32	: 843	: 380	: 103	: 60	: 12	: 555	
139	: 11	: 867	: 449	: 71	: 86	: 9	: 615	
166	: 18	: 865	: 301	: 197	: 78	: 111	: 687	
South Dakota	:	:	:	:	:	:	:	
181	: 6	: 493	: 114	: 272	: 23	: 11	: 420	
174B	: 5	: 817	: 253	: 227	: -	: -	: 550	
180	: 8	: 576	: 91	: 235	: -	: 2	: 328	
176	: 14	: 1750	: 346	: 386	: 51	: 5	: 788	
179	: 8	: 2720	: 488	: 259	: 6	: -	: 753	
182B	: 5	: 832	: 375	: 343	: -	: -	: 718	
175	: 10	: 1090	: 435	: 205	: 3	: 36	: 684	
142A-177	: 12	: 960	: 277	: 225	: -	: 13	: 515	
Nebraska	:	:	:	:	:	:	:	
184-185	: 28	: 937	: 288	: 350	: 41	: 22	: 681	
Montana	:	:	:	:	:	:	:	
137A	: 10	: 742	: 299	: 106	: 28	: 35	: 468	
119B	: 8	: 1317	: 772	: 199	: 125	: -	: 1096	
118	: 18	: 880	: 220	: 85	: 60	: 42	: 407	
113	: 32	: 1533	: 473	: 60	: 226	: 87	: 851	
114	: 34	: 813	: 321	: 64	: 244	: -	: 629	
115	: 23	: 1396	: 636	: 54	: 490	: 9	: 1198	
116	: 20	: 805	: 444	: 29	: 150	: 19	: 642	
87D-88A	: 21	: 740	: 230	: 38	: 229	: 12	: 509	
120	: 6	: 3653	: 464	: 89	: 271	: -	: 824	
Wyoming	:	:	:	:	:	:	:	
146A	: 24	: 1106	: 332	: 161	: 248	: 4	: 745	
Total or average	: 442	: 1029	: 351	: 156	: 121	: 20	: 648	

^{1/} The number of reports represented in this table and in all succeeding tables for the Northern Great Plains is somewhat less than that shown in table 1. Certain reports were omitted because of an insufficient number of trucks of certain sizes, and because of incomplete data on the cost of operation of certain motor trucks.

Table 3. - Number of farms and crop area of farms having motor trucks, and number and size of motor trucks, by type-of-farming areas, Northern Great Plains, 1933 1/

State and type-of- farming areas	Proportion of crop area per farm						Number of motor trucks by size					
	Farms: of	Size: of	Wheat: crops	Other: crops	Summer: fallow	Idle: Total	Total: Num-	1: Num-	1 1/4: Num-	1 1/2: Num-	2: Num-	3: Num-
	Num- ber	Acres	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	ber	ber	ber	ber	ber
Minnesota												
225A	6	344	28.3	67.8	3.9	-	100	-	55	-	1	6
225D	5	650	37.7	50.7	7.6	4.0	100	-	3	-	2	5
227A	6	377	18.8	80.9	.3	-	100	-	4	-	2	6
227B	3	477	24.9	71.5	3.3	.3	100	-	2	-	1	3
North Dakota												
225B	4	676	32.4	55.0	11.9	.7	100	-	4	-	-	4
173	7	777	53.6	33.5	12.9	-	100	-	4	-	3	7
174A	6	573	40.1	54.7	5.2	-	100	-	5	-	1	6
168	1	480	37.5	43.8	18.7	-	100	1	-	-	-	1
169	15	868	69.2	22.4	7.7	.7	100	-	7	-	8	15
172	7	855	52.8	45.9	1.3	-	100	-	5	-	2	7
170	10	681	63.1	36.9	-	-	100	-	8	-	2	10
171	19	1118	68.9	29.3	.5	1.3	100	1	11	-	8	20
136	32	843	68.5	18.5	10.8	2.2	100	-	25	2	7	34
139	11	867	73.0	11.5	14.0	1.5	100	1	4	1	5	11
166	18	865	43.8	28.7	11.4	16.1	100	1	14	-	3	18
South Dakota												
181	6	493	27.1	64.8	5.5	2.6	100	-	3	-	4	7
174B	5	817	46.0	54.0	-	-	100	-	1	1	3	5
180	8	576	27.7	71.7	-	.6	100	-	5	-	3	8
176	14	1750	43.9	49.0	6.5	.6	100	1	11	-	3	15
179	8	2720	64.8	34.4	.8	-	100	-	4	-	4	8
182B	5	832	52.2	47.8	-	-	100	-	3	-	2	5
175	10	1090	63.6	30.0	1.2	5.2	100	-	9	-	1	10
142A - 177	12	960	53.8	43.7	-	2.5	100	-	9	1	4	14
Nebraska												
184 - 185	28	937	42.3	48.5	6.0	3.2	100	-	18	1	100	29
Montana												
137A	10	742	63.9	22.6	6.0	7.5	100	-	8	-	2	10
119B	8	1317	70.4	18.2	11.4	-	100	-	6	1	2	9
118	18	880	54.1	20.9	14.7	10.3	100	1	12	2	3	18
113	32	1533	56.2	7.0	26.6	10.2	100	-	29	2	4	35
114	34	813	51.0	10.2	38.8	-	100	-	16	4	18	38
115	23	1396	53.1	4.5	41.6	.8	100	-	16	1	11	28
116	20	805	69.2	4.5	23.4	2.9	100	-	16	-	4	20
87D - 88A	21	740	45.2	7.5	45.0	2.3	100	-	15	1	5	21
120	6	3653	56.3	10.8	32.9	-	100	-	4	-	2	6
Wyoming												
146A	24	1106	44.6	21.6	33.3	.5	100	-	14	-	13	27
Total or average	442	1029	54.1	24.1	18.7	3.1	100	6	300	17	143	466

1/ The number of reports represented in this table and in all succeeding tables for the Northern Great Plains is somewhat less than that shown in table 1. Certain reports were omitted because of an insufficient number of trucks of certain sizes, and because of incomplete data on the cost of operation of certain motor trucks.

In the Pacific Northwest wheat was the principal crop grown (table 4). It was alternated with summer fallow. Wheat and summer fallow occupied most of the crop area. As in the Northern Great Plains, trucks of 1 and $1\frac{1}{2}$ ton capacity were the ones in general use.

COST OF OPERATING FARM MOTOR TRUCKS

In presenting this information the various elements of cost are treated separately and reported in quantity factors wherever possible since costs expressed as money units are subject to considerable change especially during periods of wide price fluctuations. The items which have been considered as operating cost are fuel, oil, repairs, license, tires and tubes, insurance, depreciation, and interest. The quantities and cost of these items per truck per year are averages, computed by dividing the total expense incurred for a given item of cost by the total number of trucks represented. The sum of these items of cost is the average annual cost of operating a truck. The yearly cost divided by the number of miles a truck was driven during the year is the average cost of operation per mile. The miles of travel per truck per year is a normal figure and does not necessarily reflect the miles traveled in 1933.

Tables 5 to 8 show the itemized cost of operating farm motor trucks of different sizes in the Northern Great Plains and tables 9 to 12 show corresponding data for the Pacific Northwest. The cost of fuel and oil shown in tables 5 and 9 is based on normal annual use and the prices paid for fuel and oil during the 1933 season. The cash repairs shown in tables 6 and 10 represent normal charges rather than actual expenditures in 1933. The cost of hired labor and other labor on truck repairs shown in these tables reflects the normal annual days of labor on repairs at prevailing 1933 rates for labor. Depreciation shown in tables 7 and 11 was calculated by dividing the first cost of the truck by its estimated years of useful life. Interest shown in these tables was charged at 6 percent of one-half of the average first cost of the truck.

For the Northern Great Plains fuel and oil constituted 18.1 percent; cash repairs 9.8 percent; license, tires, tubes, and insurance 15.6 percent; owner and family labor on repairs 1.9 percent; hired labor on repairs 0.3 percent; depreciation 41.7 percent; and interest 12.6 percent of the total annual cost of operating farm motor trucks.

For the Pacific Northwest the percentage distribution of the total annual cost was as follows: fuel and oil 20.7 percent; cash repairs 11.7 percent; license, tires, tubes, and insurance 18.4 percent; owner and family labor on repairs 1.8 percent; hired labor on repairs 0.5 percent; depreciation 37.1 percent; and interest 9.8 percent.

Operators of farm motor trucks who have no indebtedness on their trucks may consider fuel and oil, cash repairs, license, tires, tubes and insurance, and hired labor on repairs as cash costs, and owner and family labor, depreciation, and interest as non-cash costs. For those truck operators who have little, if any, equity in their trucks the cash outlay will include practically all expense except owner and family labor.

Table 4. - Number of farms and crop area of farms having motor trucks, and number and size of motor trucks, by type-of-farming areas, Pacific Northwest, 1933 1/

State and type-of- farming area	Farms	Size of farms	Crop area per farm				Proportion of crop area per farm				Number of motor trucks by size				
			Acres	Wheat crops	Other crops	Idle	Acres	Wheat crops	Other crops	Idle	Total	1 ton	1½ tons	2 tons	Total
Oregon			Number	Acres	Acres	Acres	Acres	Per- cent	Per- cent	Per- cent	Per- cent	Num- ber	Num- ber	Num- ber	Num- ber
56H	15	2280	790	14	822	11	1637	48.2	9	50.2	7	100	11	6	17
56D	27	1498	638	36	606	-	1280	49.8	2.8	47.3	-	100	13	22	38
Washington															
46	19	1801	577	97	574	29	1277	45.2	7.6	44.9	2.3	100	8	11	19
56C	12	1457	593	6	672	2	1273	46.6	5	52.8	1	100	6	7	13
56A	30	1420	592	17	601	17	1227	48.2	1.4	49.0	1.4	100	16	13	31
56B	21	683	268	123	183	-	574	46.7	21.4	31.9	-	100	10	10	21
74	7	553	205	92	174	3	474	45.3	19.4	36.7	6	100	4	1	7
Idaho															
56E	15	962	361	27	354	-	742	48.7	3.6	47.7	-	100	10	7	17
79	7	1611	585	55	519	27	1186	49.3	4.6	45.8	2.3	100	3	4	7
90	10	1000	372	13	296	63	744	50.0	1.7	39.8	8.5	100	4	6	10
91A	11	771	281	11	235	30	557	50.4	2.0	42.2	5.4	100	7	4	11
92A	2	782	362	50	321	7	740	49.4	6.8	43.8	-	100	-	2	2
Total or average	176	1324	506	45	488	14	1053	48.1	4.3	46.3	1.3	100	92	93	193

1/ The number of reports represented in this table and in all succeeding tables for the Pacific Northwest is somewhat less than that shown in table 2. Certain reports were omitted because of an insufficient number of trucks of certain sizes, and because of incomplete data on the cost of operation of certain motor trucks.

Table 5. - Quantity and cost of fuel and cylinder oil consumed by motor trucks of different sizes, Northern Great Plains ^{1/}

Size of motor truck (tons)	Motor trucks	Annual use	Gasoline				Cylinder oil			
			Per truck per year	Per 100 miles of travel	Per truck per year	Per 100 miles of travel	Per truck per year	Per 100 miles of travel	Per truck per year	Per 100 miles of travel
	Num-ber	Miles	Gal-tons	Dol-lars	Gal-tons	Dol-lars	Gal-tons	Dol-lars	Gal-tons	Dol-lars
$\frac{3}{4}$	6	1000	79	13.64	7.9	1.37	4.7	3.22	.47	.32
1	300	2427	193	32.63	8.0	1.34	7.5	4.64	.31	.19
$1\frac{1}{4}$	17	2682	238	41.28	8.9	1.54	7.9	5.43	.29	.20
$1\frac{1}{2}$	143	2694	220	37.33	8.2	1.39	8.1	4.95	.30	.18
Total or average	466	2500	201	34.14	8.0	1.37	7.7	4.75	.31	.19

^{1/} Based on normal consumption of gasoline and cylinder oil, at prices paid in 1933.

Table 6. Cost of cash repairs, license, tires, tubes, and insurance, and labor on repairs for motor trucks of different sizes, Northern Great Plains

Size of motor trucks (tons)	:License,tires,tubes, and insurance										Labor on repairs									
	Cash repairs 1/					Owner and family					Hired					Cost 2/				
	Re-	Per	Re-	Per	Per	Re-	Per	Re-	Per	Per	Re-	Per	Re-	Per	Per					
	Motor	Re-	Per	Re-	Per	Motor	Re-	Per	Re-	Per	Motor	Re-	Per	Re-	Per					
	trucks:	ports:	truck	100	ports:	truck	100	ports:	truck	100	ports:	truck	100	ports:	truck					
	trucks	per	miles:	per	miles:	trucks	per	miles:	per	miles:	trucks	per	miles:	per	miles:					
	year	of	year	of	year	year	of	year	of	year	year	of	year	of	year					
	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:	travel:					
	Num-	Dol-	Num-	Dol-	Dol-	Num-	Dol-	Num-	Dol-	Dol-	Num-	Dol-	Num-	Dol-	Dol-					
	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber	ber					
	6	5	10.00:	1.00:	6	23.21:	2.32:	4	1.0	1.0:	2	.3	.03	.26						
	300	19.45:	.80:	300	23.97:	1.23:	269	2.1	.09:	.2	.01	4.52:	.19							
	17	23.24:	1.05:	17	41.55:	1.55:	17	1.5	.06:	.3	.01	3.50:	.13							
	143	24.32:	.90:	143	40.35:	1.50:	123	2.2	.08:	.4	.01	4.97:	.18							
Total or average	466	21.14:	.85:	466	33.49:	1.34:	413	2.1	.08:	.3	.01	4.60:	.13							

1/ Normal cash outlay for new parts and skilled labor on repairs in machine shops.

2/ Represents the value, at 1933 rates for labor, of the normal time spent on repair work on trucks.

3/ Average of all trucks.

Table 7. - Average first cost, age in 1933, years of useful life, calculated depreciation and interest charge for motor trucks of different sizes, Northern Great Plains

Size of motor truck (tons)	Motor trucks	Average first cost	Average age in 1933	Useful life	Depreciation 1/ Per truck per year	Interest 2/ Per 100 miles of travel
	Number	Dollars	Years	Years	Dollars	Dollars
$\frac{3}{4}$	6	750	8.2	11.5	65.22	22.50
1	300	869	7.0	10.8	80.46	26.08
$1\frac{1}{4}$	17	1557	6.1	10.0	155.70	46.71
$1\frac{1}{2}$	143	916	4.7	9.0	101.78	27.49
Total or average	466	907	6.3	10.2	88.92	27.22

1/ Depreciation was computed by dividing the first cost of the truck by the estimated years of useful life.

2/ Charged at the rate of 6 percent of one-half the average first cost of motor trucks.

Table 8. - Total cost of using motor trucks of different sizes, Northern Great Plains

Size of motor truck (tons)	Motor trucks	Travel per year	Total cost 1/ Per truck per year	Per 100 miles of travel
	Number	Miles	excluding interest Dollars	including interest Dollars
$\frac{3}{4}$	6	1000	117.87	140.37
1	300	2427	171.67	197.75
$1\frac{1}{4}$	17	2682	275.70	322.41
$1\frac{1}{2}$	143	2694	213.70	241.19
Total or average	466	2500	187.04	214.26

1/ Based on normal consumption of fuel and oil at prices paid in 1933, normal outlay for cash repairs, and normal days of labor on repairs at 1933 rates for labor. Depreciation was computed by dividing the first cost by the estimated years of useful life. Interest was charged at 6 percent of one-half the average first cost of the motor trucks.

Data from tables 5, 6, and 7.

Table 9. - Quantity and cost of fuel and cylinder oil consumed by motor trucks of different sizes, Pacific Northwest 1/

Size of motor truck (tons)	Motor trucks	Annual use	Gasoline				Cylinder oil			
			Per truck		Per 100 miles		Per truck		Per 100 miles	
			per year		of travel		per year		of travel	
	Num-ber	Miles	Gal-lons	Dol-lars	Gal-lons	Dol-lars	Gal-lons	Dol-lars	Gal-lons	Dol-lars
1	92	3087	246	41.25	8.0	1.33	9.7	5.80	.31	.19
$1\frac{1}{2}$	93	4557	386	63.85	8.5	1.40	14.1	9.03	.31	.20
2	8	1875	159	26.96	8.5	1.44	6.2	3.66	.33	.20
Total or average	193	3745	310	51.55	8.3	1.36	11.7	7.27	.31	.19

1/ Based on normal consumption of gasoline and cylinder oil, at prices paid in 1933.

Table 10. - Cost of cash repairs, license, tires, tubes, and insurance, and labor on repairs for motor trucks of different sizes, Pacific Northwest

Size of motor trucks (tons)	License, tires, tubes, and insurance										Labor on repairs									
	Cash repairs 1/					Owner and family					Hired					Cost 2/				
	Num-ber	Dol-lars	Re-ports	Per 100 trucks	Per 100 miles	Re-ports	Per 100 miles	Re-ports	Per 100 miles	Re-ports	Per 100 miles	Re-ports	Per 100 miles	Re-ports	Per 100 miles	Cost	Per 100 miles	Cost	Per 100 miles	Cost
1	92	27.72	.90	92	46.21	1.50	72	1.3	.06	27	.7	.02	6.10	.20						
1½	93	38.30	.85	93	56.75	1.25	32	2.4	.05	22	.4	.01	6.59	.14						
2	3	32.50	1.73	3	67.88	3.62	8	3.1	.17	-	-	-	7.53	.40						
Total or average 3/	193	33.26	.89	193	52.19	1.39	162	2.1	.06	49	.6	.02	6.49	.17						

1/ Normal cash outlay for new parts and skilled labor on repairs in machine shops.

2/ Represents the value, at 1933 rates for labor, of the normal time spent on repair work on trucks.

3/ Average of all trucks.

Table 11. - Average first cost, age in 1933, years of useful life, calculated depreciation and interest charge for motor trucks of different sizes, Pacific Northwest

Size of motor truck (tons)	Motor trucks	Average first cost	Average age in 1933	Useful life	Depreciation 1/ Per 100 miles of travel per year	Interest 2/ Per 100 miles of travel per year
	Number	Dollars	Years	Years	Dollars	Dollars
1	92	877	6.3	9.4	93.30	26.29
1½	93	926	4.0	8.2	112.93	27.78
2	8	1547	6.4	9.0	171.89	46.41
Total or average : 193		928	5.2	8.8	105.45	27.84

1/ Depreciation was computed by dividing the first cost of the truck by the estimated years of useful life.

2/ Charged at the rate of 6 percent of one-half the average first cost of motor trucks.

Table 12. - Total cost of using motor trucks of different sizes, Pacific Northwest

Size of motor truck (tons)	Motor trucks	Travel per year	Total cost 1/ Per truck per year	Per 100 miles of travel
	Number	Miles	Dollars	Dollars
1	92	3087	220.38	246.67
1½	93	4557	287.95	315.73
2	8	1875	310.42	356.83
Total or average : 193		3745	256.11	283.95

1/ Based on normal consumption of fuel and oil at prices paid in 1933, normal outlay for cash repairs, and normal days of labor on repairs, at 1933 rates for labor. Depreciation was computed by dividing the first cost by the estimated years of useful life. Interest was charged at 6 percent of one-half the average first cost of motor trucks.

Data from tables 9, 10, and 11.

